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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,665	07/15/2003	Sung-Jae Moon	YOM-0038	7173

7590 05/24/2006  
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EXAMINER

DUDEK, JAMES A

ART UNIT PAPER NUMBER

2871

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/619,665	<b>Applicant(s)</b> MOON, SUNG-JAE	
	<b>Examiner</b> James A. Dudek	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
     4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US005608558A (558).

Per claim 1, 558 teaches the liquid crystal display comprising: TFT array [shown in figure 7] including a plurality of first display signal lines [gate lines], a plurality of second display signal lines crossing the first display signal lines [data lines], a plurality of switching elements connected to the first display signal lines and the second display signal lines [transistors at the cross points of the gate and data lines], a plurality of pixel electrodes connected to the switching elements [see capacitor coupled to the transistor], and an inspection line formed on the TFT array panel for receiving the test signals to the second display signal lines [see lines on TABs 9a and 9b] wherein the inspection line is separated from the first and second display signal lines, the switching elements, and the pixel electrodes [see figure for the gap between these element], the at least one inspection line includes a test pad for receiving an externally applied test signal [15,17], and the test pad is formed at a position where an external device is attached to the liquid crystal panel. Lacking from 558 is the test line formed on the TFT array panel. However, it was well known to form test lines of the substrate in order to form the test lines at the same time the TFTs are formed and thus reduce the processes steps required. Accordingly it would have been obvious to one of ordinary skill at the time of invention to form the test line on the substrate of 558.

Per claim 2, 558 teaches the liquid crystal display of claim 1, wherein the at least one inspection line comprises at least two inspection lines, and the second display signal lines are alternately connected to the at least two inspection lines [see figure 7].

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Per claim 3, 558 teaches the liquid crystal display of claim 1, further comprising a plurality of drivers connected to the second display signal lines [required to drive the cell and thus inherent].

Per claim 4, 558 teaches the liquid crystal display of claim 3, further comprising a plurality of connecting lines interconnecting the drivers [see line 13].

Per claim 5, 558 teaches the liquid crystal display of claim 4, wherein the connecting lines extend straight [see figure 7].

Per claim 6, 558 teaches the liquid crystal display of claim 4, wherein the test pad is closer to an edge of the liquid crystal panel than to the connecting lines.

Per claim 7, 558 teaches the liquid crystal display of claim 3, wherein the test pad is disposed between the driver and an edge of the liquid crystal panel [see the figures the pads are on the outer regions of the panel].

Per claim 8, 558 teaches the liquid crystal display of claim 3, wherein each of the drivers is formed as a chip [see paragraph 0006].

Per claim 9, 558 teaches the liquid crystal display of claim 1, further comprising a plurality of flexible printed circuit films attached to the liquid crystal panel, wherein the external devices are the flexible printed circuit films [see film 9a].

Per claim 10, 558 teaches the liquid crystal display of claim 1, wherein the at least inspection line and the second display signal line are electrically separated [the data and gate lines are separated and thus the inspection lines for 15a is separated electrically from the signal lines].

Per claim 11, 558 teaches the liquid crystal display of claim 10, further comprising a connecting member including the same layer as the pixel electrodes, wherein the connecting member is connected to at least one of the at least one inspection line and the second display signal line [the pads on the tft substrate.]

Per claim 12, 169 teaches the liquid crystal display of claim 11, but lacks the at least one inspection line includes the same material as at least one of the first display signal lines, the second display signal lines, and the pixel electrodes. However, this was well known in order to decrease the manufacturing steps by form both lines at the same time. Accordingly it would

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have been obvious to one of ordinary skill at the time of invention to combine the method of forming multiple lines from the same material with 558.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Response to Arguments***

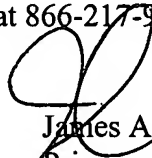
Applicant's arguments filed 3/13/06 have been fully considered but they are not persuasive. Applicant argues that the Katsumi reference does not teach the inspection line on the TFT substrate and improperly equating the external devices to the tab. First, the Examiner agrees that Katsumi does not teach the inspection lines and pads and the active substrate. However, as stated in the rejection, it was well known and motivation was provided; see rejection supra. Second, the external devices are the devices shown in figure 8 not just the tab. As stated in the rejection, the devices are shown by reference nos. 15 and 17.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 571-272-2290. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James A. Dudek  
Primary Examiner  
Art Unit 2871